Fermilab
ES&H Section

March 24, 2003

TO: Jed Brown

FROM: Bill Griffing

SUBJECT: Revised FESHM Chapter – 8060

Enclosed you will find revised FESHM Chapter 8060, National Environmental Policy Act Review, which has been modified to clarify when NEPA review is required and what level of documentation that review should entail. The applicability of NEPA to various activities has been clarified, the NEPA review procedure was refined, and several definitions were improved upon. In addition, a new Generic Routine Maintenance Categorical Exclusion that was applied for and authorized by DOE in June 2002 has been included in this revised chapter. The NEPA Review chapter has been completely overhauled and the changes are major; the changes have been agreed upon by the Environmental Protection Subcommittee. The revised chapter was posted for Laboratory-wide review and the comments were incorporated into the revised chapter.

After final approval, please return this approval page to Minnie at MS119 for posting on the web.

Encl.

Recommended for Approval:

Jed Brown — Date 03/24/03

Approved:

Mike Witherell — Date 3/25/03

Encl.

Database login 4/2
Sent for posting on web 4/1
Date posted 4/2
E-mail sent 4/2

NATIONAL ENVIRONMENTAL POLICY ACT REVIEW

INTRODUCTION

The purpose of this chapter is to ensure that actions proposed by Fermilab receive the appropriate environmental impact review pursuant to the National Environmental Policy Act (NEPA) as found in 40 CFR 1500-1508, the Council on Environmental Quality regulations, the DOE NEPA Implementing Procedures (10 CFR 1021) and the Fermilab Director's Policy Manual.

NEPA requires federal agencies to consider the environmental impact of proposed actions prior to initiating those actions. Consequently, the terms of NEPA must be met during the planning phase of a project (or when substantial project changes are being considered) and NOT immediately preceding or after an action has been taken. Varying degrees of documentation are necessary for federal agencies to demonstrate compliance with NEPA. This chapter will serve to assure that potential environmental impacts of proposed actions to be taken by Fermilab are reviewed in a timely manner and that the appropriate documentation, if necessary, is generated.

It is Fermilab's intent to fully comply with the letter and spirit of NEPA. To ensure that environmental impacts of proposed actions are considered early in the decision-making process, Fermilab shall conduct necessary NEPA reviews in the initial phase of the activity planning process.

Applicability

These procedures (for Flow Chart see Technical Appendix A) apply to all Fermilab Federal actions that will potentially impact the environment during any phase of activity (design, construction, operation, decommissioning, etc.). The Environmental Impacts Checklist (EIC, see Technical Appendix B) shall be used as an aid to determine the potential for environmental impact. If any of the EIC items apply to the activity, a NEPA review shall be conducted. (NOTE of Clarification: Material purchases are NOT in themselves an action, however, these purchases may be part of an action (project or activity) that would potentially impact the environment. If material purchases were considered as part of the initial NEPA review of an action, subsequent review is NOT necessary for repeat purchases of these materials as long as they are used in the same manner and context originally described in the NEPA review. The focus of NEPA is to evaluate an action in its entirety including any necessary material purchases. Material purchases shall, whether part of an action or not, follow the requirements of FESHM 5010. In addition, the Generic Routine Maintenance Categorical Exclusion (see Technical Appendix C) will apply to many activities; however, periodically a more formal NEPA review requiring submittal of a Project Information Form (PIF, see Technical Appendix D) may be necessary. Assistance in completing the EIC shall be

enlisted from your Division/Section ES&H personnel. This EIC is not exhaustive and therefore Division/Section ES&H personnel shall be consulted if a potential environmental impact applies but is not listed.

Activities conducted under the National Environmental Research Park (NERP) program may fall within the parameters of a unique Generic CX that is not included in this chapter. Project initiators for all proposed NERP activities should contact the ES&H Section prior to initiating a NEPA review.

DEFINITIONS

Action: See Federal Action below.

Categorical Exclusion (CX): Actions, which are exempt from further documentation under NEPA because they have been, determined by 40 CFR 1508.4 to be actions that individually or cumulatively do not have a significant effect on the human environment. Neither an environmental assessment (EA) nor an environmental impact statement (EIS) is required for these actions. DOE categorical exclusions are listed in the NEPA Implementing Procedures at 10 CFR 1021, Subpart D, Appendices A and B.

Environmental Assessment (EA): A document that assesses whether a proposed action is a "major Federal action significantly affecting the quality of the human environment," and that serves as the basis for a determination by DOE as to whether an environmental impact statement is required.

Environmental Evaluation Notification Form (EENF): A comprehensive document describing proposed Fermilab projects that serves to notify DOE of potential environmental impacts and to recommend an appropriate level of NEPA review to DOE. The EENF document is submitted to DOE for evaluation and approval. Actions may not proceed until a DOE determination is secured.

Environmental Impact Statement (EIS): A document prepared by DOE in accordance with the requirements of section 102(2)(c) of the National Environmental Policy Act and CEQ Regulations at 40 CFR 1500-1508.

Federal Action: A project or activity(s) located (or proposed to be located) in a defined geographic area which may include design, construction, and operation of an individual facility or research development, demonstration and testing for a procedure or product that is entirely or partly financed, assisted, conducted, regulated or approved by DOE.

Generic CX: A CX determination by DOE that covers multiple and/or repetitive actions conducted routinely at a site over a period of time, and that sets appropriate bounding criteria.

Initiating Division/Section: The Division/Section that will operationally control the project after construction is complete is understood to be the action initiator.

NEPA Project Information Form (PIF): An internal Laboratory form that provides information about a proposed project relevant to any potential environmental impacts. An electronic version is available by clicking on the above.

NEPA Reviewer: Designated Division/Section personnel who are responsible for deciding whether a proposed action meets the criteria of the Generic Routine Maintenance CX in Technical Appendix C. Assists Division/Section project initiators in the preparation of Project Information Forms.

Project Initiator: A person in the Division/Section responsible for an action who is assigned the task of carrying it out. This person shall be knowledgeable about the project and will most likely originate requisitions connected with the project and/or have signature authority over the project's funding.

SPECIAL RESPONSIBILITIES

Associate Director for Operations Support shall:

- Act as formal liaison between the laboratory and DOE regarding NEPA issues.
- Review all environmental evaluation notification forms (EENFs) prior to submission to DOE.
- Coordinate NEPA review with other administrative procedures such as funding requests and schedule considerations.
- Provide counsel to the ES&H Section Head during all stages of NEPA decision-making.

Division/Section Head shall:

- Ensure that Project Initiators are aware of their responsibility for NEPA compliance.
- Provide resources as necessary to support Project Initiators and NEPA Reviewers in fulfilling their responsibilities.
- Ensure that all Division/Section NEPA Reviewers annually review the NEPA FESHM chapter and any additional Division/Section specific NEPA procedures and are thereby qualified to assist Project Initiators.

Division/Section Project Initiators shall:

- Ensure that environmental impacts of their proposed actions/projects are considered early in the planning process and that necessary NEPA reviews are conducted by following the procedures enumerated in this chapter. The Division/Section Project Initiator (PI) initiating (the Division/Section that will operationally control the project after construction is complete is understood to be the action initiator) an action is responsible for ensuring that the action is screened for potential environmental impact. Assistance in carrying out this

responsibility shall be obtained from the Division/Section ES&H NEPA Reviewer. If the action is determined to require NEPA review, the Division/Section PI is responsible for ensuring that an appropriate NEPA review is conducted. However, the actual NEPA review process may be delegated through a 'memorandum of agreement' (this does not absolve the initiating Section/Division from their responsibility to ensure that the NEPA review is conducted).

Division/Section ES&H NEPA Reviewer shall:

- Be aware of environmental requirements associated with projects/activities conducted within their Division/Section.
- Work in cooperation with the Project Initiator to ensure quality NEPA documentation.
- Annually review the NEPA chapter and Division/Section specific NEPA procedures in order to remain qualified.

ES&H Section shall:

- Review PIFs prepared by other Divisions/Sections to ensure NEPA compliance.
- Prepare EENFs (when required) for proposed actions and submit the EENF documentation to the Associate Director for Operations Support for review (the Associate Director will then submit to DOE), utilizing information gleaned from the PIF and other input from Division/Section personnel.
- Assist personnel from other Divisions/Sections in preparing Environmental Assessments and other necessary NEPA documents.
- Assess Division/Section implementation of NEPA procedures through periodic formal audits.
- Serve as the primary point of contact between DOE and Fermilab on all NEPA matters at the Laboratory.

PROCEDURE

Early in the activity concept and planning process, Project Initiators shall do the following (see Technical Appendix A for flow chart of these steps):

1. Evaluate proposed activities (utilizing the EIC, see Technical Appendix B) to identify potential environmental impacts. If any of the checklist items apply to the activity it is considered a NEPA action and a NEPA review is required; proceed to step 2 below. NOTE: If further NEPA review is not applicable, other ES&H review requirements still apply under FESHM Chapter 5010.
2. Enlisting the assistance of your Division/Section ES&H personnel, decide whether the proposed activity meets the criteria for a Generic Routine Maintenance Categorical Exclusion (CX) as listed at the end of this chapter. A qualified Division/Section NEPA Reviewer must make this decision. Proposed actions that clearly meet the criteria for a Generic Routine Maintenance CX shall

be approved by stamping (or otherwise documenting) the requisition or construction directive, as appropriate. If the action does not meet the criteria for a Generic Routine Maintenance CX, proceed to step 3 below.

3. Enlisting the assistance of your Division/Section ES&H personnel, prepare and submit a NEPA Project Information Form (PIF) to the ES&H Section for proposed actions that do not meet the criteria of the Generic Routine Maintenance CX. To facilitate the submittal process, a PIF may be submitted electronically to the ES&H Section. Subsequently, the PIF shall be printed and signed by the Project Initiator, the Division/Section NEPA Reviewer, and Division/Section Head and kept on file by the Division/Section ES&H group. (An EENF will be completed by the ES&H Section and forwarded to the Project Initiator for his/her review and signature. Upon receipt of the signed EENF, it is then forwarded to the Associate Director for Operations Support. The Associate Director for Operations Support ultimately sends the EENF to DOE for a determination. The activity may not proceed until the DOE determination is secured.)

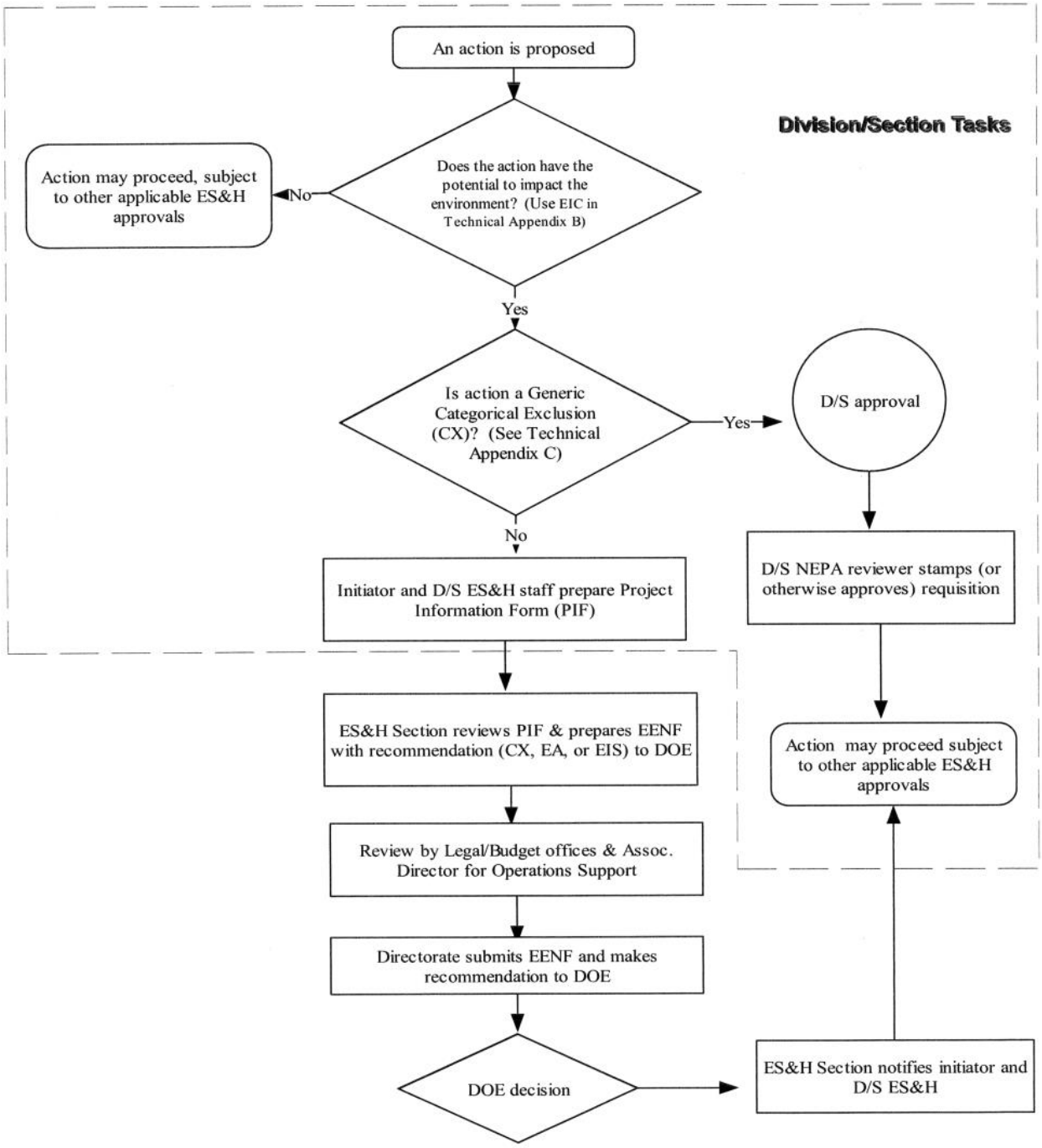
NOTE: If a proposed action is deemed by DOE to have the potential for "significant" environmental impact, it may be necessary for the initiating Division/ Section to develop an Environmental Assessment (EA) and/or Environmental Impact Statement (EIS). The need for an EA and/or EIS is infrequent.

REFERENCES

1. National Environmental Policy Act, P.L. 91-224, 42 U.S.C. 4371-4374.
2. President's Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR1500-1508.
3. DOE NEPA Implementing Procedures, 10 CFR Part 1021
4. DOE Floodplain/Wetlands Regulations, 10 CFR Part 1022
5. FESHM Chapter 5010 and 8012

Technical Appendix A

FERMILAB NEPA REVIEW PROCESS



Technical Appendix B

ENVIRONMENTAL IMPACTS CHECKLIST (EIC)

Will the proposed action change or cause disturbance to the following resources?

_____Threatened/Endangered or Otherwise Protected Species or Critical Habitats

_____Wetlands (Note: Wetlands are not limited to standing water. Areas such as low forests, sedge meadows and stream banks may qualify as wetlands under the Clean Water Act and DOE Regulations. Contact ES&H to determine whether an area has been designated as a wetland.)

Will the proposed action involve any of the following regulated substances or activities?

_____Clearing or Excavation (If a PIF is necessary, the following information will be needed: estimated area to be affected; volume of spoils, expected disposition of spoils; and proposed soil erosion control measures.)

_____Demolition or decommissioning

_____Asbestos removal

_____PCBs (processing, transport, disposal or removal; PCBs are primarily found in pre-1980 electrical equipment such as capacitors, fluorescent light ballast, old transformers etc.)

_____Chemical use or storage (If the action involves excavation, determine whether the location was ever used for chemical dispensing, was a waste or product storage area, or has been the site of any chemical spills. Also, find out if the proposed location is near one of Fermilab's 5 RCRA Solid Waste Management Units.)

_____Pesticides

_____Air emissions (boiler or other sources of gaseous or particulate emissions)

_____Liquid effluent (including sanitary sewer, soil, or surface water)

_____Underground storage tanks

_____Hazardous or other regulated waste (including radioactive or mixed waste)

_____Radiation exposures or radioactive air emissions

_____Radioactivation of soil or groundwater

Technical Appendix C

GENERIC ROUTINE MAINTENANCE CATEGORICAL EXCLUSION UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

Approved by DOE on June 11, 2002

This CX covers routine maintenance activities, and supersedes the previous CX approved for Fermilab by DOE on May 21, 1991. Activities covered by this CX, meeting the restrictions specified at the end of this section, include the following:

a) Installation or repair of underground utilities including sewers, electrical, public water supplies and industrial water supplies, natural gas lines, and communications. The work includes excavation of earth, asphalt, concrete, gravel, rock or sand; backfilling, including placement of sand, gravel, or other compactable fill; and placement of asphalt, concrete, or topsoil and vegetation as required to restore the excavated and disturbed areas to a suitable profile and condition.

b) Construction or relocation of small (<256 sq. ft.) support structures such as sheds, enclosures, docks, or room additions.

c) Installation, removal, and replacement activities that occur on a regular and routine basis. This applies to all buildings and enclosures at Fermilab and previously disturbed ground adjacent to those buildings. Actions include, but are not limited to, installation of piping systems, HVAC equipment, standard electrical equipment, communications systems, construction and finishing of partitions, access docks, and concrete pads. Examples of actions undertaken under this paragraph include, but are not limited by:

    i. Maintenance related to operation and testing of facility equipment, including minor modifications to components of existing accelerators that improve performance. Maintenance of shielding berms.

    ii. Maintenance and repair of existing monitoring wells, including replacement of well components.

    iii. Landscaping and horticultural activities, including but not limited to, mowing, fertilizer application, pesticide/herbicide application, removal or planting of trees.

    iv. Maintenance and repair of existing roads, parking lots, hardstands and sidewalks, including the adjacent area (within 25 ft).

    v. Snow removal on roads, trails, parking lots and sidewalks.

vi. Maintenance and repair of existing man-made swales, waterways, ditches, spillways, weirs, and industrial cooling ponds, including shoreline maintenance and maintenance of water intake structures.

vii. Installation and maintenance of fencing to restrict access to radiation control areas.

viii. Farm leasing actions, tilling, licensed pesticide/herbicide application, and other farming activities undertaken for routine farm leasing activities in designated farm tracts.

ix. Prairie reconstruction and other land management activities, including plowing, planting and prescribed burns covered by Clean Air Act permits.

x. Routine transportation of hazardous materials in compliance with applicable standards.

xi. Incidental removal of asbestos-containing materials during maintenance otherwise covered by this CX.

RESTRICTIONS:

a) Activities undertaken under this CX will follow the conditions in 10CFR1021, Subpart D, Appendix B "Conditions that are Integral Elements of the Classes of Actions in Appendix B". Activities described in this CX shall not result in adverse impacts to wetlands, flood plains, or historically significant sites. In addition, this CX shall not include any actions that adversely affect prairie reconstruction areas.

b) All activities shall adhere to erosion control planning practices as specified in the Fermilab ES&H Manual, Chapter 8012. Erosion control practices and controls shall conform to the Illinois Urban Manual.

c) All activities involving clearing, grubbing, digging, trenching or other land disturbance shall be limited under this CX to areas disturbed since 1969.

d) All practicable measures to minimize waste and prevent/reduce pollution shall be utilized in actions taken under this CX. All debris shall be recycled where possible.

e) No actions shall be taken under this CX that would require new permits or modifications to existing Federal or State permits.

Technical Appendix D
NEPA PROJECT INFORMATION FORM (PIF)

DRAFT, Rev. 1.5, 03/03

INSTRUCTIONS

The following information shall be provided to the ES&H Section for all applicable activities. An activity that clearly meets the definition for a Generic Routine Maintenance CX DOES NOT REQUIRE a PIF. A qualified Division/Section NEPA Reviewer shall determine whether the Generic Routine Maintenance CX applies.

The purpose of providing this information is to facilitate the timely preparation of the proper documentation for a NEPA determination by DOE. Include potential environmental impacts for all phases of the activity (design, construction, operation, decommission, etc). Failure to provide this information will result in delays in processing the NEPA paperwork. Questions about items on this form may be directed to the ES&H Section NEPA Coordinator.

BASIC INFORMATION

Project/Activity Title:

Project Number:

Project Initiator Name and Phone extension:

Division/Section initiating this activity:

Type Funding (GPP, AIP, IHEM, Line Item, etc.):

Total Estimated Cost:

JUSTIFICATION FOR THE PROJECT

1. Describe the purpose and/or need for the project?

2. What are the reasonable alternatives to this project and why were they rejected? (Reasonable alternatives include the following: utilization of a different approach, process, or methodology; conducting the activity at an alternative location; or doing nothing. If inaction would prevent the fulfillment of a purpose and/or need then state this and explain.)

DESCRIPTION OF THE PROPOSED ACTION

3. Provide a narrative description of the activity/project. The description shall focus only on physical actions to be undertaken, such as digging, trenching, demolishing,

building, etc. Theoretical or engineering explanations ARE NOT RELEVANT to this analysis. The type(s) of equipment to be used shall be included where applicable. Indicate the estimated schedule of the action. If this is new construction, show the location of the project on an attached site map and provide a specific area map showing the limits of the project.

4. Describe the magnitude of the project. Provide as much quantitative information as possible relevant to the overall impact of the project on the environment. (For example, what is the area of a new building, length of utility lines to be installed, the volume of soil to be excavated, volume and character of effluent(s), magnitude of radioactivity, etc.)

POTENTIAL ENVIRONMENTAL EFFECTS

5. Please check items that apply. Include a detailed explanation of all items checked.

Will the proposed action change or cause disturbance to the following resources?

_____Threatened/Endangered or Otherwise Protected Species or Critical Habitats

_____Wetlands (Note: Wetlands are not limited to standing water. Areas such as low forests, sedge meadows and stream banks may qualify as wetlands under the Clean Water Act and DOE Regulations. Contact ES&H to determine whether an area has been designated as a wetland.)

Will the proposed action involve any of the following regulated substances or activities?

_____Clearing or Excavation (The following information will also be needed on the PIF: the estimated area to be affected, the volume of spoils, the expected disposition of spoils, and the soil erosion control measures to be utilized.)

_____Demolition or decommissioning

_____Asbestos removal

_____PCBs (processing, transport, disposal or removal; PCBs are primarily found in pre-1980 electrical equipment such as capacitors, fluorescent light ballast, old transformers etc.)

_____Chemical use or storage (If the action involves excavation, determine whether the location was ever used for chemical dispensing, was a waste or product storage area, or has been the site of any chemical spills. Also, find out if the proposed location is near one of Fermilab's 5 RCRA Solid Waste Management Units.)

_____Pesticides

_____Air emissions (boiler or other sources of gaseous or particulate emissions)

_____Liquid effluent (including sanitary sewer, soil, or surface water)

_____Underground storage tanks

_____Hazardous or other regulated waste (including radioactive or mixed waste)

_____Radiation exposures or radioactive air emissions

_____Radioactivation of soil or groundwater

Other relevant disclosures

_____Threatened violation of ES&H permit requirements

_____Siting/construction/major modification of waste recovery or TSD facilities

_____Disturbance of pre-existing contamination

_____New or modified permits

_____Potential public controversy

_____Action/involvement of another federal agency

_____Public utilities/services

_____Depletion of a non-renewable resource

Project Initiator_____

Division/Section NEPA Reviewer_____

Division/Section Head_____